



موتور ویبره  
RPM 1500



**ماهان موتور آریا**

MAHAN MOTOR ARIA

mahan.motor.aria



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کاوه، پلاک ۵۶، ساختمان ماهان موتور آریا



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The MVSI series represents the line of reference products for manufacturer's of vibrating machines and plants operating in many industrial sectors and is made up of the largest range on the market, with centrifugal force values up to 30500 Kgf (300kN).

The MVSI series has been conceived to guarantee higher performance in all conditions and environments and complies with the most recent IEC and EN international standards for use in atmospheres with potentially explosive powders. In particular, the MVSI series can be used in areas 21 and 22.

## Technical features

### Power supply

Three-phase voltage from 24V to 690V, 50Hz or 60Hz or single-phase 100-130V, 60Hz and 200-240V, 50Hz (single-phase types are supplied without capacitor); suitable for use with an inverter from 20Hz to the base frequency with constant torque load profile.

### Polarity

2, 4, 6 and 8 standard poles, 10 and 12 poles on request.

### Conformity with European Directives

Low voltage 2006/95/EC; ATEX 94/9/EC.

### Reference Regulations

EN 60034-1, IEC/EN 61241-0, IEC/EN 61241-1.

### Functioning

Continual service (S1) at maximum declared centrifugal force and electric power. Intermittent services are also possible depending on the type of vibrator and the operating conditions. For detailed information, contact our technical assistance office.

### Centrifugal force

Range extended up to 30500 Kgf. (300 kN), with centrifugal force adjustable from 0 to 100%.

### Mechanical protection

IP 66 according to IEC 529, EN 60529.

### Protection against mechanical impacts

IK 08 according to IEC 68, EN 50102.

### Insulation class

Class F (155°C), class H (180°C) on request.

### Tropicalization

Standard on all vibrators, with vacuum encapsulation up to gr. AF 33 and 35, with "drop by drop" trickle system for larger sizes.

### Ambient temperature

From -20°C to +40°C. Versions for higher or lower temperatures are available on request.

### Vibrator thermal protection

Standard PTC rated thermistor heat detectors 130°C (DIN 44081-44082) from size 70, on request for smaller sizes. On request, thermistors with different temperatures and anti-condensation heaters.

### Fixing of the vibrator

In all positions and therefore without restriction.

### Lubrication

All vibrators are lubricated in the factory and do not require further lubrication if used in normal operating conditions ("FOR LIFE" lubrication). In heavy duty operating conditions periodical re-lubrication may be applied to size 35 and larger.

### Terminal box

Large fixed electrical connections. Special shaped terminals allow to fix the power supply cable, protecting it from loosening.

### Electric motor

Three-phase asynchronous type. Designed for maximum starting torques and torque curves specific to requirements of vibrating machines. Insulated windings using vacuum encapsulating up to size 35; using the "drop by drop" trickle system with class H resin for larger sizes. The rotor is die cast aluminium.

### Casing

In high-tensile aluminium alloy up to size 60, in spheroidal cast iron for larger sizes. Patented shape that improves heat dispersion and lowers normal working temperature at full load.



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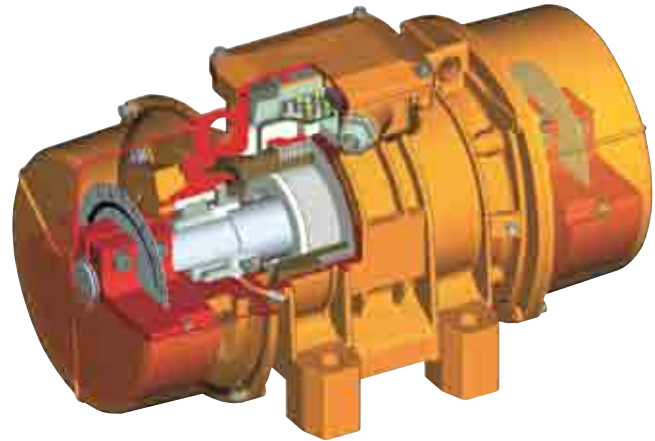
Category: II 2 D

Level of protection: tD A21 IP66

Temperature class: see tab. page 6-13

EC certificate: LCIE 05 ATEX 6163 X

Areas of use: 21, 22



### Certifications

#### Bearing flange

Constructed in cast iron (spheroidal or grey) or in aluminium with steel bearing seat. The geometry of the flange transmits the load to the casing uniformly.

#### Bearings

Custom made with particular geometry, especially designed for Italvibras, suitable to support both high radial and axial loads.

#### Motor shaft

In treated steel alloy (Isothermic hardening) resistant to stress.

#### Eccentric weights

Allow continual adjustment of the centrifugal force. This adjustment is realized by a graduated scale, which expresses the centrifugal force as a percentage of the maximum centrifugal force.

A patented system (patent N°MO98A000194), called ARS, prevents adjustment errors.

#### Weight covers

In aluminium alloy. On several sizes split covers are available, please refer to section MVSI-TS on page 14. On request stainless steel AISI 304 weight covers can be supplied.

#### Painting

Electrostatic surface treatment based on polymerised epoxy polyester powder in oven at 200°C. Tested in salt spray for 500 hours.

#### Stainless steel protection

On request, corrosion high grade protection (stainless steel micro suspensions in a polyurethanic paint) is available.

Several sizes are available with different mounting bolt patterns. Please contact sales office at Italvibras.

Regulation CAN/CSA - C22.2 N. 100-95, file n° LR100948 Class 4211 01 – Motors and generators.



Mechanical protection IP66 (EN 60529), protection against impacts IK 08 (EN 50102)



II 2 D, tD A21 IP66  
IEC/EN 61241-0, IEC/EN 61241-1  
Certificate n. LCIE 05 ATEX 6163X



Certificate GOST-R n° POCC IT.ГБ04.В01154, standards GOST R 51330.0-99, GOST R 51330.1-99, GOST R 51330.8-99, GOST R IEC 61241-1-1-99



Certificate of Conformity n° IECEx CES 09.0001X standards IEC 61241-0, IEC 61241-1



Comply with the applicable European Union directives





### 4 poles - 1500/1800 rpm

	Description				Mechanical specifications								Electrical specifications			
	Code	Type	SIZE	II2D Temp. class	Static moment* kgmm		Centrifugal force				Weight kg		Max input power W		Max. current A	
					50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	400 V 50 Hz	460 V 60 Hz
three-phase	601340	MVSI 15/35-S02	00	• 120°C	12.0	12.0	30.2	43.5	0.30	0.43	5.60	5.60	85	95	0.21	0.20
	601341	MVSI 15/80-S02	01	• 120°C	31.0	21.0	77.9	76.1	0.76	0.75	6.70	6.40	85	95	0.21	0.20
	601366	MVSI 15/100-S02	01	• 120°C	38.9	31.0	97.9	112	0.96	1.10	7.10	6.70	85	95	0.21	0.20
	601367	MVSI 15/200-S02	10	• 120°C	84.2	58.8	213	214	2.09	2.10	12.5	11.7	170	170	0.41	0.40
	601372	MVSI 15/400-S02	20	• 120°C	163	113	412	411	4.04	4.03	19.0	18.2	300	350	0.60	0.60
	601373	MVSI 15/550-S02	20	• 120°C	219	163	552	592	5.42	5.81	20.4	19.0	300	350	0.60	0.60
	601408	MVSI 15/700-S02	30	• 120°C	286	209	720	760	7.06	7.46	27.5	26.2	525	665	0.92	0.98
	601513	MVSI 15/900-S02	30	• 120°C	357	286	900	1037	8.83	10.2	30.0	27.5	525	665	0.92	0.98
	601524	MVSI 15/1100-S02	35	• 120°C	415	271	1045	982	10.3	9.63	35.0	30.5	550	680	0.95	0.95
	601217	MVSI 15/1410-S02	40	• 120°C	561	400	1413	1449	13.9	14.2	44.0	41.0	900	1050	1.45	1.50
	601219	MVSI 15/1710-S02	50	• 150°C	715	485	1798	1757	17.6	17.2	51.0	48.5	1100	1200	2.00	1.90
	601267	MVSI 15/2000-S02	50	• 170°C	817	561	2054	2033	20.1	19.9	55.5	51.5	1350	1450	2.50	2.30
	601220	MVSI 15/2410-S08	60	• 150°C	962	674	2420	2444	23.7	24.0	71.0	66.0	1600	1700	3.20	3.00
	601268	MVSI 15/3000-S08	60	• 135°C	1235	858	3106	3107	30.5	30.5	80.0	73.5	1900	2000	3.80	3.50
	601221	MVSI 15/3810-S02	70	• 135°C	1526	1034	3840	3744	37.7	36.7	119	110	2200	2500	3.90	3.90
	601269	MVSI 15/4300-S02	70	• 135°C	1720	1173	4326	4250	42.4	41.7	123	117	2500	2800	4.80	4.65
	601211	MVSI 15/5010-S02	80	• 135°C	1990	1364	5007	4941	49.1	48.5	161	153	3600	3400	6.00	5.00
	601447	MVSI 15/6000-S02	80	• 135°C	2248	1677	5654	6075	55.5	59.6	163.5	155	3600	3400	6.00	5.00
	601165	MVSI 15/7000-S02	90	• 135°C	2598	1822	6536	6600	64.1	64.7	208	195	6000	6000	10.5	9.00
	601166	MVSI 15/9000-S90	95	□ 135°C	3260	2260	8199	8183	80.4	80.3	225	210	7000	8000	11.6	11.5
601204	MVSI 15/9500-S02	97	□ 135°C	3346	2462	8416	8916	82.6	87.5	317	303	7500	8500	12.2	12.0	
601205	MVSI 15/11500-S90	100	□ 135°C	4544	3166	11430	11467	112	112	433	411	10000	10500	17.5	15.5	
601271	MVSI 15/14500-S90	100	□ 135°C	5614	4126	14120	14940	138	147	458	424	11000	12000	20.0	20.0	

	Code	Type	SIZE	II2D Temp. class	50 Hz	60 Hz	30.2	43.5	0.30	0.43	5.60	5.60	220 V	115 V		
													50 Hz	60 Hz	0.43	1.00
single-phase	601340	MVSI 15/35-S02	00	• 120°C	12.0	12.0	30.2	43.5	0.30	0.43	5.60	5.60	90	100	0.43	1.00
	601341	MVSI 15/80-S02	01	• 120°C	31.0	21.0	77.9	76.1	0.76	0.75	6.70	6.40	90	100	0.43	1.00
	601366	MVSI 15/100-S02	01	• 120°C	38.9	31.0	97.9	112	0.96	1.10	7.10	6.70	90	100	0.43	1.00
	601367	MVSI 15/200-S02	10	• 120°C	84.2	58.8	213	214	2.09	2.10	12.5	11.7	210	230	1.00	2.00
	601372	MVSI 15/400-S02	20	• 120°C	163	113	412	411	4.04	4.03	19.0	18.2	240	320	1.20	2.80
	601373	MVSI 15/550-S02	20	• 120°C	219	163	552	592	5.42	5.81	20.4	19.0	240	320	1.20	2.80
	601408	MVSI 15/700-S02	30	• 120°C	286	209	720	760	7.06	7.46	27.5	26.2	450	550	2.15	5.15

\*\* Working moment = 2 x static moment.

□ CSA certification on request, with feeding line included.



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Fig. A

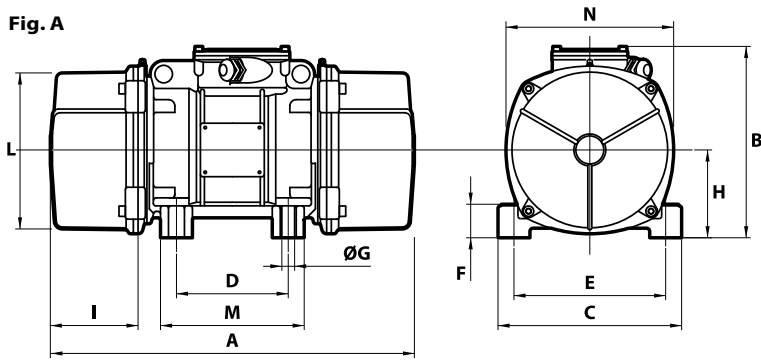
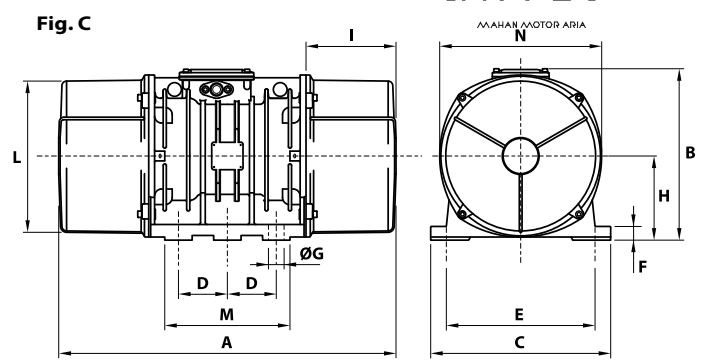


Fig. C



I <sub>A</sub> /I <sub>N</sub> 50 Hz 60 Hz		Type	Dimensional specifications (mm)													Capacitor (µF)		Cable entry thread	
			Fig.	A	B	C	D	E	Holes ØG N°		F	H	I	L	M	N	220 V 50 Hz		115 V 60 Hz
1.78	1.95	MVSI 15/35-S02	A	211	153	125	62-74**	106	9	4	24	61	46	103	100	117	-	-	M20x1,5
1.78	1.95	MVSI 15/80-S02	A	235	153	125	62-74**	106	9	4	24	61	58	103	100	117	-	-	M20x1,5
1.78	1.95	MVSI 15/100-S02	A	249 (50Hz) 235 (60Hz)	153	125	62-74**	106	9	4	24	61	65 (50Hz) 58 (60Hz)	103	100	117	-	-	M20x1,5
2.34	2.75	MVSI 15/200-S02	A	301	179	152	90	125	13	4	28	73	77	127	128	141	-	-	M20x1,5
3.33	3.50	MVSI 15/400-S02	A	344	203	167	105	140	13	4	30	82.5	93	145	140	160	-	-	M25x1,5
3.33	3.50	MVSI 15/550-S02	A	386	203	167	105	140	13	4	30	82.5	114	145	140	160	-	-	M25x1,5
3.48	3.43	MVSI 15/700-S02	A	394	216	205	120	170	17	4	45	93.5	106	170	160	182	-	-	M25x1,5
3.48	3.43	MVSI 15/900-S02	A	394	216	205	120	170	17	4	45	93.5	106	170	160	182	-	-	M25x1,5
4.45	4.89	MVSI 15/1100-S02	A	435	225	205	120	170	17	4	54	104.5	117.5	187	162	203	-	-	M25x1,5
4.10	4.20	MVSI 15/1410-S02	A	448	246	230	140	190	17	4	54	116	108	207	190	225	-	-	M25x1,5
4.29	4.89	MVSI 15/1710-S02	A	500	246	230	140	190	17	4	54	116	134	207	190	225	-	-	M25x1,5
4.30	4.90	MVSI 15/2000-S02	A	574	246	230	140	190	17	4	54	116	171	207	180	225	-	-	M25x1,5
6.09	7.23	MVSI 15/2410-S08	A	537	272	275	155	225	22	4	70	130	137	238	210	253	-	-	M25x1,5
6.50	7.50	MVSI 15/3000-S08	A	617	272	275	155	225	22	4	70	130	177	238	210	253	-	-	M25x1,5
7.11	6.92	MVSI 15/3810-S02	A	584	321	310	155	255	23.5	4	77	157	137	277	215	295	-	-	M25x1,5
5.90	7.10	MVSI 15/4300-S02	A	666 (50Hz) 584 (60Hz)	321	310	155	255	23.5	4	77	157	178 (50Hz) 137 (60Hz)	277	215	295	-	-	M25x1,5
7.02	8.00	MVSI 15/5010-S02	A	630	347	340	180	280	26	4	80	165	150	303	240	320	-	-	M32x1,5
7.02	8.00	MVSI 15/6000-S02	A	630	347	340	180	280	26	4	80	165	150	303	240	320	-	-	M32x1,5
6.48	7.67	MVSI 15/7000-S02	A	680	370	390	200	320	28	4	90	180	160	330	270	350	-	-	M32x1,5
5.43	5.57	MVSI 15/9000-S90	A	629	395	392	200	320	28	4	100	192	134,5	355	270	375	-	-	M32x1,5
6.56	6.67	MVSI 15/9500-S02	C	862	437	460	125	380	39	6	35	215	230	387	320	414	-	-	M32x1,5
7.03	8.00	MVSI 15/11500-S90	C	990	454	530	140	440	45	6	38	230	240	423	370	448	-	-	M32x1,5
8.00	8.00	MVSI 15/14500-S90	C	990	454	530	140	440	45	6	38	230	240	423	370	448	-	-	M32x1,5
1.20	1.30	MVSI 15/35-S02	A	211	153	125	62-74**	106	9	4	24	61	46	103	100	117	3.15	25	M20x1,5
1.20	1.30	MVSI 15/80-S02	A	235	153	125	62-74**	106	9	4	24	61	58	103	100	117	3.15	25	M20x1,5
1.20	1.30	MVSI 15/100-S02	A	249 (50Hz) 235 (60Hz)	153	125	62-74**	106	9	4	24	61	65 (50Hz) 58 (60Hz)	103	100	117	3.15	25	M20x1,5
1.50	1.85	MVSI 15/200-S02	A	301	179	152	90	125	13	4	28	73	77	127	128	141	5	25	M20x1,5
2.50	2.21	MVSI 15/400-S02	A	344	203	167	105	140	13	4	30	82.5	93	145	140	160	32/12 ◦	35	M25x1,5
2.50	2.21	MVSI 15/550-S02	A	386	203	167	105	140	13	4	30	82.5	114	145	140	160	32/12 ◦	40/35 ◦	M25x1,5
5.44	3.63	MVSI 15/700-S02	A	381	210	205	120	170	17	4	45	91.5	88	168	160	178	96/16 ◦	160/40 ◦	M25x1,5

I<sub>A</sub>/I<sub>N</sub> = ratio between start-up current and maximum current. \*\* Slot ◦ Start-up capacitor / Running capacitor. Several sizes are available with different mounting bolt patterns. Please contact sales office at Italvibras.